

The NEW Plant Canopy Imager ■ CI-110

Fast and simple—
In depth canopy analysis
any time, anywhere

Capture wide-angle plant canopy images while instantly estimating Leaf Area Index (LAI) and measuring Photosynthetically Active Radiation (PAR) levels. The digital, self-leveling camera, updated touch screen, and included filters work together to collect, calculate, and save data in any daylight condition.

New unit with delay trigger release capture and amplified antennae connected to four satellite constellations provide accurate, instant location data along LAI measurements.

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The new CI-110 combines hemispherical canopy photography and image analysis with light measurement to non-destructively calculate leaf area index (LAI) and other canopy parameters. The self-leveling digital camera takes 150 degree images of plant canopies for hemispherical photograph analysis. The 24 photosynthetically active radiation (PAR) sensors in the arm of the instrument can be used for an alternative measurement of LAI, to assess current radiation levels of the site, and to evaluate sunflecks. The updated, ergonomic design is paired with a 7" capacitive touch screen, a trigger with delayed image release for crisp images, and the ability to add or exchange filters over the camera lens.



Lens	Equidistant wide-angle lens
Image resolution	8g image size, 282,600 pixels
Interface	7" capacitive touch screen, 6 button keypad, trigger-release capture
Measuring time	0.5 second
Fish-eye lens angle	150°
Operating temperature	5 to 50 °C
Arm length	400 mm
Battery capacity	Approximately 6+ hours

Product Features

- ▶ Permanent, 150° image of the plant canopy
- ▶ Measures photosynthetically active radiation (PAR) and calculates sunflecks using 24 photodiodes.
- ▶ Non-destructive calculation of leaf area index (LAI) using imager or PAR sensors
- ▶ Calculated LAI of plant canopies across multiple size classes; adjustable camera lens focus for varying canopy heights
- ▶ No above-canopy reference readings required
- ▶ Built-in software provides the ability to change images RGB (red, green and blue) color value(s).
- ▶ Image and data visible in the field and saved for further analysis
- ▶ GPS location saved for follow-up measurements, with access to four satellite constellations and amplified antenna.
- ▶ Internal compass for standardizing measurements across locations
- ▶ Full, user-selectable range of zenith & azimuth angles, digitally applied
- ▶ User selectable and literature-based thresholding methods, including the Otsu Method and Entropy Crossover Technique
- ▶ Neutral Density Filters included to allow image acquisition across a wide-range of exposures
- ▶ Calculation of diffuse radiation transmission coefficients, mean foliage inclination angles, plant canopy extinction coefficients and Canopy Gap size distribution
- ▶ Performs measurements under any sky condition